

Reading: Odomirok.14-F
Model: 2017.Spring #14
Problem Type: Schedule F provision for reinsurance

(Schedule F - 2016.Fall Q13) a-Question

Given An insurer has only 2 reinsurers with data as follows:

		unauthorized reinsurer B	authorized reinsurer A
recoverables NOT in dispute			
$T^n \Rightarrow$	total reinsurance recoverable	132	115
$P^n \Rightarrow$	recoverable on paid loss & LAE	155	90
$P_{90}^n \Rightarrow$	recoverable on paid loss & LAE > 90 days past due	10	20
	recoverable on paid loss & LAE > 120 days past due	3	4
		unauthorized reinsurer B	authorized reinsurer A
recoverables in dispute			
$T^d \Rightarrow$	total reinsurance recoverable	8	0
	recoverable on paid loss & LAE		
$P_{90}^d \Rightarrow$	recoverable on paid loss & LAE > 90 days past due	0	0
	recoverable on paid loss & LAE > 120 days past due	0	0
		unauthorized reinsurer B	authorized reinsurer A
other junk you need for the calculation			
$Recvd \Rightarrow$	amount received prior 90 days	20	15
part of C $\Rightarrow$	letters of credit (LOC)	40	65
part of C $\Rightarrow$	ceded balances payable		
part of C $\Rightarrow$	other amounts due reinsurers		

Notation **RP** **Reinsurance Provision** $\Leftarrow$ this is what we want to calculate
 T Total Recoverable (includes amounts NOT IN dispute & amounts IN dispute)
 P Paid Recoverable
 C Collateral (or Offsets to RP)

A superscript of ⁿ means the amount is NOT in dispute

A superscript of ^d means the amount IS in dispute

A subscript of ₉₀ means the amount is PAST 90 DAYS due

C_s Collateral that is **secured**

C_u Collateral that is **unsecured**

$$\begin{array}{lcl} \text{RP} & = & \text{RP(A)} + \text{RP(B)} \\ \text{RP} & = & 103.6 + 4.0 \end{array}$$

(Schedule F - 2016.Fall Q13) b-Answer

$$\text{RP} = 107.6 \quad \Leftarrow \text{this is the final provision for reinsurance}$$

unauthorized reinsurer A

$$\begin{aligned} \text{RP(A)} &= T - C \\ &+ \min(C, 20\% \times P_{90}^n) \\ &+ \min(C, 20\% \times T^d) \\ &= 140 - 40 \\ &+ \min(40, 20\% \times 10) \\ &+ \min(40, 20\% \times 8) \\ &= 103.6 \quad \Leftarrow \text{REMEMBER: This is capped by } T = 140 \end{aligned}$$

authorized reinsurer B (that's overdue)

The provision for authorized but overdue reinsurers depends on whether or not they are **slow-paying**.

$$\begin{aligned} \text{slow-paying ratio} &= P_{90}^n / (P'' + \text{Recvd}) \\ &= 20 / (90 + 15) \\ &= 19.0\% \end{aligned}$$

slow-paying threshold is 20% so this reinsurer is

NOT slow-paying

==>

RP(B)

=

4.0

if reinsurer IS NOT slow-paying:

$$\begin{aligned} \text{RP(B)} &= 20\% \times (P_{90}^n + P_{90}^d) \\ &= 20\% \times (20 + 0) \\ &= 4.0 \quad \Leftarrow \text{REMEMBER: This is capped by } T = 115 \end{aligned}$$

if reinsurer IS slow-paying:

$$\begin{aligned} \text{RP(B)} &= 20\% \times \max(T - C, P_{90}^n + P_{90}^d) \\ &= 20\% \times \max(115 - 65, 20 + 0) \\ &= 10.0 \quad \Leftarrow \text{REMEMBER: This is capped by } T = 115 \end{aligned}$$